

What is claimed is:

1. An access control unit to interface one ATM core network and at least one bidirectional access network, including: means to perform ATM signalling and resource management to provide dynamically adjustable ATM switched virtual connections (SVC) for subscribers connected to the access network.
2. An access control unit as claimed in claim 1 wherein the bidirectional access network is an HFC network.
3. An access control unit as claimed in claim 1 further comprising: a receiving unit to receive requests of subscribers for ATM connections with individual parameters.
4. An access control unit as claimed in claim 3 wherein each request includes an individual subscriber address or identification, a bandwidth request and a service category request.
5. An access control unit as claimed in claim 3 wherein the means perform the assignement of the requested resources automatically after authentication and out of the limited bandwidth of the ATM core network interface.
6. An access control unit as claimed in claim 5 wherein no bandwidth is assigned if the requested bandwidth is not available.

7. An access control unit as claimed in claim 1 wherein the means create a new Finite State Machine for each new ATM connection to store the connection status.
8. An access control unit as claimed in claim 1 wherein the means generate an encryption key and a decryption key for each new ATM connection.
9. An access control unit as claimed in claim 1 wherein the means is able to change the reservation of bandwidth from time to time for each ATM connection and for each direction.
10. An access control unit as claimed in claim 9 wherein the change of the reservation is performed depending on the volume of data to be transmitted or the service requested.
11. An access control unit as claimed in claim 1 wherein the means are able to perform translations between ATM traffic parameters and MAC specific parameters.
12. An access control unit as claimed in claim 1 wherein the means include a central management instance with a predefined database containing all access network elements identified by their MAC address.
13. An access control unit as claimed in claim 1 wherein the means are adapted to perform permanent virtual connections (PVC) in addition.
14. An access control unit to interface one ATM core network and at least one bidirectional access network, including: a processing unit programmed with a computer program to perform ATM signalling and resource management to provide dynamically adjustable ATM switched virtual connections (SVC) for subscribers connected to the access network, a database connected to the processing unit for intermediate storage, and defined interfaces connected to the processing unit.
15. Computer program comprising computer program code means adapted to perform ATM signalling and resource management to provide dynamically adjustable ATM switched virtual connections (SVC) when said program is run on a computer or a processing unit.